



Plague

Plague is a non-native, infectious disease caused by the bacteria *Yersinia pestis*, which is generally associated with rodents and their fleas. Plague can be prevented in humans by using insect repellent and avoiding direct contact with animals and their fleas or burrows.

General Plague Information

Geographic Distribution

Plague is found on every continent except Antarctica and Australia. Plague — introduced to the US by humans in the early 1900's — has had significant impacts on some wildlife populations. Many parks in the western US have found plague among wildlife. Human cases of plague are rare but do occur when humans and wild rodents come into close contact.

Hosts

Yersinia pestis is generally associated with small rodents and their fleas.

Transmission

Plague is transmitted primarily through the bites of fleas that have fed on infected rodents. In parks in the west, rodents most often infected include squirrels, chipmunks, woodrats, and prairie dogs.

Although rare, plague can also be transmitted to humans and animals through close contact with an infected animal.

Signs and Symptoms

Clinical signs of plague depend upon the mode of transmission and can develop 1-6 days after exposure. Infections in humans and animals can be fatal without early treatment.

Symptoms of plague include:

- Swelling at the site of the bite
- Swollen or ulcerating lymph nodes/glands
- Fever, chills, aches
- Cough, pneumonia, and systemic illness

Inhaling plague bacteria causes severe pneumonia and often death if not treated.

Prevention and Control

Certain parts of parks may be closed during a plague outbreak to limit contact with fleas. In order to protect the health of humans and endangered or vulnerable species, treatment of the environment with insecticides to kill fleas can be effective in the immediate area of an outbreak, but the effects are short-lived. Vaccines have been successfully used for some wildlife and can provide long-term protection.

To prevent the disease while visiting the parks:

- View animals in the wild from a safe distance
- Avoid direct contact with animals
- Use insect repellent

Prevention of human infection can be accomplished by avoiding contact with sick or dead animals and their fleas. Never approach or touch sick or dead animals and report the animal to a park ranger.

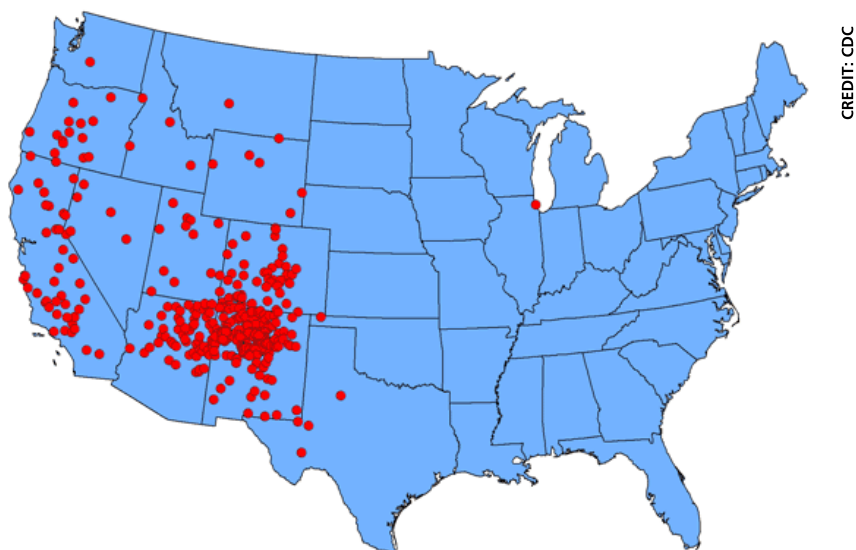
Testing and Treatment

If you think you have the symptoms of plague, consult your healthcare provider. Antibiotics are effective if given in time.

One Health and Plague

Plague is a non-native disease introduced into this country by human activities. Since its introduction, the disease has spread to native wildlife populations, with devastating consequences. Although significant human outbreaks haven't occurred since 1924, wildlife populations continue to be impacted. Some species, such as the black-footed ferret and Canada lynx, have almost gone extinct because of plague.

When animals die from plague, their fleas look for new hosts, thereby spreading disease and increasing risk to humans. Parks are helping to develop a vaccine for wildlife against plague. By protecting wildlife from plague, we can help protect ourselves from plague — this is One Health in action.



CREDIT: CDC

Plague cases in the United States, 1970–2012.

More Information

www.cdc.gov/plague

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